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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/645,576	08/21/2003	Ritu Verma	J6852(C)	8223
201	7590	08/11/2005	EXAMINER	
UNILEVER INTELLECTUAL PROPERTY GROUP 700 SYLVAN AVENUE, BLDG C2 SOUTH ENGLEWOOD CLIFFS, NJ 07632-3100			ARNOLD, ERNST V	
			ART UNIT	PAPER NUMBER
			1616	

DATE MAILED: 08/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/645,576

Applicant(s)

VERMA ET AL.

Examiner

Ernst V. Arnold

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 10-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 8/21/03, 2/03/05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

### **DETAILED ACTION**

The Examiner acknowledges receipt of application number 10/645576. Please note that a line has been drawn through the Laufer et al. reference on form PTO-1449 because it is not present and has not been considered.

### ***Election/Restrictions***

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-9 are drawn to a process for incorporating ZnO particles in a cosmetic composition, classified in class 514, subclass 494.
- II. Claims 10-19 are drawn to a cosmetic composition, classified in class 424, subclass 401.
- III. Claim 20 is drawn to a method of controlling or preventing appearance of tanning, classified in class 424, subclass 59.

The inventions are distinct, each from the other because of the following reasons:

Inventions Group I and Group II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case, the product can be produced without additional solid asymmetric particles (step (a) of instant claim 10). The additional step

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(a) in claim 10 introduces other asymmetric particles and presents a different scope for the invention and therefore becomes an undue search burden.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.

A telephone call was placed to Ellen Plotkin on 07/28/05 and resulted in the election of Group I invention claims 1-9.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claims 10-20 are withdrawn from consideration as being drawn to a non-elected invention. Accordingly, claims 1-9 are presented for examination on the merits.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 9 is drawn to a process of claim 1, wherein said ZnO reacts with fatty acid and said reaction is controlled to a conversion of about 5% to about 10% of said ZnO. It is unclear to the Examiner if the Applicants means controlled conversion of about 5% to about 10% ZnO and a fatty acid to form: 1) a zinc-fatty acid complex or 2) a ZnO particle with a fatty acid exterior layer. Additionally, it is unclear if this is mole percent or weight percent.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1,2 and 4-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mitchnick et al. (U.S. Patent No. 5,441,726) in view of Galley et al. (U.S. Patent No. 5,609,852).

Mitchnick et al. disclose a creamy foundation composition of the following components:

Composition		
(1) stearic acid	5 wt. %	
(2) lipophilic glycerol monostearate	2.5	10
(3) cetylstearyl alcohol	1	
(4) propylene glycol monolaurate	3	
(5) squalane	7	
(6) olive oil	8	
(7) purified water	the balance	
(8) antiseptic	a suitable amount	15
(9) triethanolamine	1.2	
(10) sorbitol	3	
(11) titanium oxide	10	
(12) talc	3	
(13) coloring pigment	a suitable amount	
(14) zinc oxide rods	8	20
(15) perfume	a minute amount	

The foundation was prepared by mixing components 11 to 14. The un-coated zinc oxide rods (8% by weight) can be 100 nm in diameter (Column 13, lines 20 and 26-27). Components 7 through 10 are mixed together to form a solution (Column 13, lines 7-28). The zinc oxide containing component is dispersed in the solution of components 7-10 and heated to 75 °C. Components 1 through 6 (containing 5 % by weight stearic acid) are mixed and heated to 80 °C to form a solution which is then added to the solution containing zinc oxide to produce an emulsion (Column 13, lines 30-33). The emulsion is cooled under stirring to 50 °C and the final perfume ingredient is added (Column 13, lines 33-35). The mixture is cooled under stirring. The Applicant has defined asymmetric particles as fatty acids of 12 to 22 carbon atoms with stearic acid being a preferred asymmetric particle (Specification, pages 8 and 9).

Mitchnick et al. do not expressly teach heating the mixture of ZnO particles and stearic acid to a temperature of less than about 80 °C for about 5 to about 10 minutes.

Galley et al. provide a general teaching for the preparation of sunscreen compositions comprised of metal oxides such as zinc oxide. Galley et al. disclose that the oil phase components are heated together to 70-75 °C and then mixed with the

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aqueous phase containing the metal oxide for 5-10 minutes. The emulsion is then cooled (See: Example 18 Column 9, lines 45-52; Example 19 Column 10, lines 20-26 and Example 20 Column 10, lines 61-67). Galley et al. disclose that fatty acid soaps, such as potassium stearate, are effective emulsifying agents that can be added to the composition (Column 4, line 52).

It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to prepare a composition containing zinc oxide and stearic acid by the procedure of Mitchnick et al. using the suggested heating period of 5 to 10 minutes of Galley et al. to produce metallic soap coated ZnO particles of the instantly claimed invention.

One of ordinary skill in the art would have been motivated to do this in the interest of optimizing the amount of time required to produce the final product, which would save valuable research time and resources.

The cosmetic preparation of Mitchnick et al. is comprised of 5 % by weight stearic acid and 8 % by weight of zinc oxide. Mixing of these components at a temperature less than about 80 °C and cooled under stirring to a temperature of 50 °C to quench the reaction between ZnO and stearic acid would produce the solid asymmetric particles of the instant invention in at least 10% by weight of the composition (instant claim 7). In instant claim 8, the Examiner interprets about 60 °C to about 70 °C to encompass  $60 \pm 6$  °C to  $70 \pm 7$  °C in which case the temperature of Mitchnick et al., 75 °C, is encompassed by that range.

From the teaching of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the claimed invention, as a whole, would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made, because every element of the invention and the claimed invention as a whole have been fairly disclosed or suggested by the teachings of the cited references.

***Claim Rejections - 35 USC § 103***

Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mitchnick et al. in view Galley et al. and Halls (U.S. Patent No. 6,267,949).

The teachings of Mitchnick et al. and Galley et al. have been fully discussed in this Office Action and the discussion there is incorporated herein by reference.

Mitchnick et al. does not expressly disclose the addition of ZnO in an amount of about 1% to about 4% by weight of the cosmetic composition.

Halls discloses sunscreen compositions comprised of nano-size ZnO particles in the preferred range of 0.5-15% by weight (Column 4, lines 52-55). Halls provides compositions with 0.5, 1.0, 2.0 and 4.0% by weight zinc oxide in example numbers 8-11, respectively (Column 7, lines 1-8).

It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to prepare a composition of Mitchnick et al., using the



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heating period suggested by Galley et al., containing zinc oxide in the percent weight range of about 1 % to about 4 % as suggested by Halls to produce the instant invention.

One of ordinary skill in the art would have been motivated to do this because Halls discloses that the sun protection factor can be adjusted by judicious selection of the amount of ZnO added (0.5 to 4.0 % by weight in this example) thus creating lotions for a wide variety of consumers seeking various levels of sun protection (See: Column 7, lines 1-8).

From the teaching of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the claimed invention, as a whole, would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made, because every element of the invention and the claimed invention as a whole have been fairly disclosed or suggested by the combined teachings of the cited references.

### ***Claim Rejections - 35 USC § 103***

Claims 1, 2 and 4-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mitchnick et al. (U.S. Patent No. 5,441,726) in view of Galley et al. (U.S. Patent No. 5,609,852) and Ramp et al. (U.S. Patent No. 4,558,086).

The teachings of Mitchnick et al. and Galley et al. have been fully discussed in this Office Action and the discussion there is incorporated herein by reference.

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Mitchnick et al. do not expressly teach controlling the reaction of ZnO with a fatty acid to a conversion of about 5% to about 10% of said ZnO. (Please note: For the purpose of examining this claim, the Examiner interprets "about 5% to about 10%" to read by weight for the reasons set forth under 35 USC 112 second paragraph, supra.) The combined teachings of Mitchnick et al. and Galley et al. do provide guidance on the time, temperature and quenching of the reaction between ZnO and stearic acid.

Ramp et al. disclose a general teaching on the reaction of ZnO with stearic acid in a composition and demonstrate a means to control the percent reaction between ZnO and stearic acid by variation of the time and temperature. For example, no reaction ( $\approx 0\%$ ) was observed after heating the composition to 50 °C for 5 minutes (Column 7, lines 25-34) and effectively all ( $\approx 100\%$ ) had reacted when heated to 177 °C for 20 minutes (Column 7, lines 41-44).

One of ordinary skill in the art would have used the method and temperatures of Mitchnick et al., as described above, for the suggested time period of Galley et al., and would have controlled the reaction between ZnO and a fatty acid, as demonstrated by Ramp et al., to a conversion of about 5% to about 10% by weight of said ZnO. The process steps are the same as the instantly claimed invention and therefore the result must be the same; i.e., controlling the reaction to a conversion of about 5% to about 10% by weight of said ZnO.

One of ordinary skill in the art would have been motivated to do this because it would have been part of the standard laboratory practice for calculating reaction efficiency.

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From the teaching of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the claimed invention, as a whole, would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made, because every element of the invention and the claimed invention as a whole have been fairly disclosed or suggested by the combined teachings of the cited references.

### ***Conclusion***

Claims 1-9 are rejected.

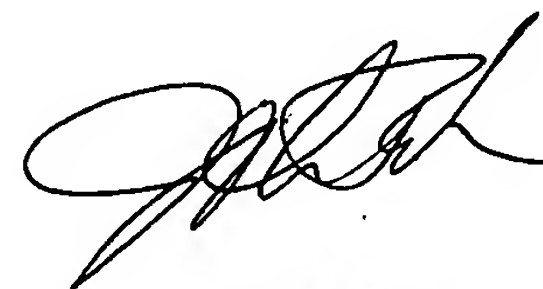
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ernst V. Arnold whose telephone number is 571-272-8509. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Kunz can be reached on 571-272-0887. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

EVA



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